

## On the Use of "Cresson" as a Generic Name (Hymenoptera: Sphegidae)

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V. S. L. Pate (1938, Trans. Amer. Ent. Soc. 64: 153) proposed the name *Cresson* for a genus of wasps allied to *Nysson*. As a footnote he remarked, "I take great pleasure in dedicating this peculiar and interesting group to the late Ezra Townsend Cresson, Sr., in recognition of his excellent work upon the aculeate Hymenoptera and the Nyssonids in particular."

It may have occurred to Dr. Pate that if "Nysson" could be used as a Latin or Latinized word, so could "Cresson." Such conclusion was an error. "Nysson" may be compared to the Latinized Greek word *Ilion* and is a Latinization of the Greek word *νύσσω*. "Cresson" as an English name can not be Latinized by leaving it unchanged. In that form it is a vernacular name and can not enter into zoological nomenclature.

The International Rules of Zoological Nomenclature provide as a mandatory rule that a generic name must be either a Latin word or a Latinized word or an arbitrary combination of letters treated by its original author as being such a word. They further provide that infractions of this rule must be corrected, when noticed, but attributed to the original author and date.

Since *Cressonia* is preoccupied by Grote and Robinson, 1865, and *Cressona* by Dallas, 1851, I hereby propose the following spelling:

**Cressonius** Pate, 1938, correction of *Cresson* Pate 1938.

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## The Distribution of Northeastern Insects

By J. CHESTER BRADLEY

In recent years I have had occasion to review the distribution of several thousand species of insects each of which at some point or other enters the northeastern United States. I wish to illustrate the more frequently repeated distributional patterns and to show why the usual methods of stating distribution fail to indicate distributional trends.

Before proceeding further let me define two terms that I shall use: "austrad" meaning proceeding towards areas of increasing warmth, and "boread" meaning proceeding towards areas of decreasing warmth. One can not accurately use southwards and northwards because other factors, such as altitude and distance from tempering bodies of water, not only operate but may overshadow and even reverse those directions.

Our North American biota consists of two opposing elements: 1) a boreal element, many species of which are circumpolar, and 2) an austral element, which finds its closest affinity in the Neotropical Region, from which many of its species emanate. The former, which I term thermophygic, find their maximum abundance in cold regions, and push austrad along the highlands until they reach conditions of temperature too high for their existence. The latter, the thermophilous forms, at their maximum in warm climates, extend boread along the Coastal plain and water-courses until they in turn reach barriers where temperature conditions are too rigorous for their existence.

**Carabus chamissonis** is an arctic beetle, reaching the United States only on the summit of Mt. Washington. Its distribution is typical of arctic species, which frequently are also circumpolar, and often occur on Mt. Katahdin, the higher Adirondacks and Northern Michigan. This range is extended by other species farther austrad on the highlands, until such a distribution pattern is reached as represented by:

**Carabus maeander maeander.** The southern range of this subspecies includes Nova Scotia, New Brunswick, Maine, southern Ontario, southern Michigan, and northern Illinois. But it also extends down the Rocky Mountains into Colorado.

**Monochamus scutellatus** shows still further extension austrad, and has a range typical of innumerable boreal forms. From arctic America to Connecticut, thence in the highlands to northern Georgia (often in such cases also northern Alabama), and southwards in the Rocky Mts. to New Mexico.

**Carabus taedatus** exemplifies a boreal species that extends austrad on the Pacific Coast and in the Rocky Mountains, but that eastward has pushed only as far as Minnesota and Lake

Superior. This occurs so frequently that it need never be a cause for surprise when one of the boreal species of the western mountains turns up in northern Michigan.

**Montezumina modesta** is primarily a species of the Austro-riparian fauna, but it extends boread in diminishing numbers along the coastal plain to southeastern Virginia and in the Mississippi Basin to southern Illinois. Such species frequently reach the District of Columbia in the east.

**Canthon pillularius** is a typical species of the Austral Sub-region. It extends from ocean to ocean along the entire southern border of the United States, boread on the coastal plain to Rhode Island, and up the Hudson River as far as Albany. In the Mississippi Basin it extends up the Ohio River to the vicinity of Pittsburgh, and along Lake Erie (probably on the north side) to Buffalo, to central eastern Michigan, Iowa, Kansas, and Colorado, but it does not occur on the Appalachian highlands. A surprising number of such species are also recorded from Quebec, and probably have followed down the St. Lawrence, without being known from central or northern New York and New England.

It is to be noted that this species reaches well up into Michigan, and it is astonishing the number of really southern species that have been recorded from the south shore of Lake Superior, where they mingle with boreal forms from the north. Probably in this mixing ground they have established local biotypes, as Hulten points out has been done in plants, that have no correspondence eastward, but in Michigan are capable of existing in the more rigorous Alleghanian Fauna and even the Canadian Zone.

The grasshopper **Conocephalus spartinae** is an austral species that occurs from Texas to Florida, and then boread to Maine but not at all up the Mississippi Basin.

**Mecas bicallosa** on the contrary is an austral species that occurs eastwards to Georgia, but boread only in the Mississippi Basin where it reaches Wisconsin, North Dakota, and Colorado, and into the Great Basin. This is a typical prairie and plains species distribution, although a little unusual in reaching Georgia.

Finally *Calosoma scrutator* is an austral species that has thoroughly established itself in the Alleghanian Fauna. From Mexico it extends to California, and along the Gulf Coast to Florida, thence boread to New Hampshire, central New York, Quebec, Ontario, northern Michigan, Iowa, and Nebraska. This is an exceedingly common distributional pattern.

Let us again look at the distributional map of the boreal or thermophygic *Monochamus scutellatus*. Many an author would summarize it as: New England and South Atlantic States to the Rocky Mts. and Canada, or perhaps just Atlantic States to the Pacific Coast.

The austral or thermophilous *Canthon pillularius* would be summarized in the same way: New England and South Atlantic States (or just Atlantic States) to the Pacific Coast.

Each statement totally fails to suggest the true distributional pattern.

I wish to suggest that in stating distribution one should always attempt to determine first whether the maximum abundance is in the north (thermophygic species) or in the south (thermophilous species); that in the former case he should begin by stating the northern limits of distribution (as Alaska, Quebec, and Labrador) followed by the austral limits (as Connecticut, mountains of n. Ga. and n. Ala., Ohio River, Iowa, North Dakota, Rocky Mts., and north Pacific coast). If the species is holarctic, its occurrence in Europe or Asia should be noted at the outset.

In the case of an austral species I suggest that one first state the areas south of the United States, if any, in which it occurs, then its most southern limits within the United States, possibly from west to east (since more enter from Mexico than from Cuba), then its limits boread east of the Appalachian mountains, and finally its limits in the Mississippi and Ohio River basins, the St. Lawrence Basin, and the Great Lakes, unless the species concerned extends far enough to the north to include the Appalachian mountains themselves, in which case the limits boread all the way across from east to west may be stated.

Thus for *Canthon laevis* one could say, "Southern California, New Mexico, Texas, Louisiana, Alabama, and Florida to Rhode

Island, the Hudson River Basin to Albany, and in the Mississippi and St. Lawrence Basins to southwestern Pennsylvania, central eastern Michigan, Iowa, Kansas and Colorado." But for *Calosoma scrutator* one would say, "Mexico; California, Texas, Mississippi, Alabama, and Florida to New Hampshire, central New York, Quebec, Ontario, northern Michigan, Iowa, and Nebraska."

By this method a much truer picture of the distribution pattern and faunal affinities can be indicated.

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### The Insect Repellent Lamp? \*

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During the summer of 1955 the response of insects to a 100-watt inside-frosted white lamp was compared to that of a 100-watt yellow lamp. The latter was selected as a logical substitute for a 100-watt white lamp where insects are a problem and it is desirable to reduce the insect nuisance. Such a lamp has been used commonly as an "insect repellent" light. Each lamp was placed in a Minnesota light trap and the two were hung within ten feet of each other. The traps were operated for 17 consecutive nights from June 15 to July 1. Both were operated for the same period from 8:30 P.M. to 8 A.M. The bulbs were interchanged every two or three days to compensate for slight differences in the construction of the traps and to avoid a favored position for either. The insects captured in the cyanide jars of the two traps were sorted and identified\* daily to the outstanding orders.

Although insects are generally attracted more strongly to the blue, violet and ultra-violet end of the spectrum, it is known that some insects respond to yellow. Milne † stated that *Empoasca*

\* Authorized for publication on October 1, 1956, as paper No. 2096 in the journal series of the Pennsylvania Agricultural Experiment Station.

\* The traps were operated by Arnold Ecklund, a student at the University.

† MILNE, L. J. and M. J. MILNE (1945), *Ent. Americana* 25(2): 47.